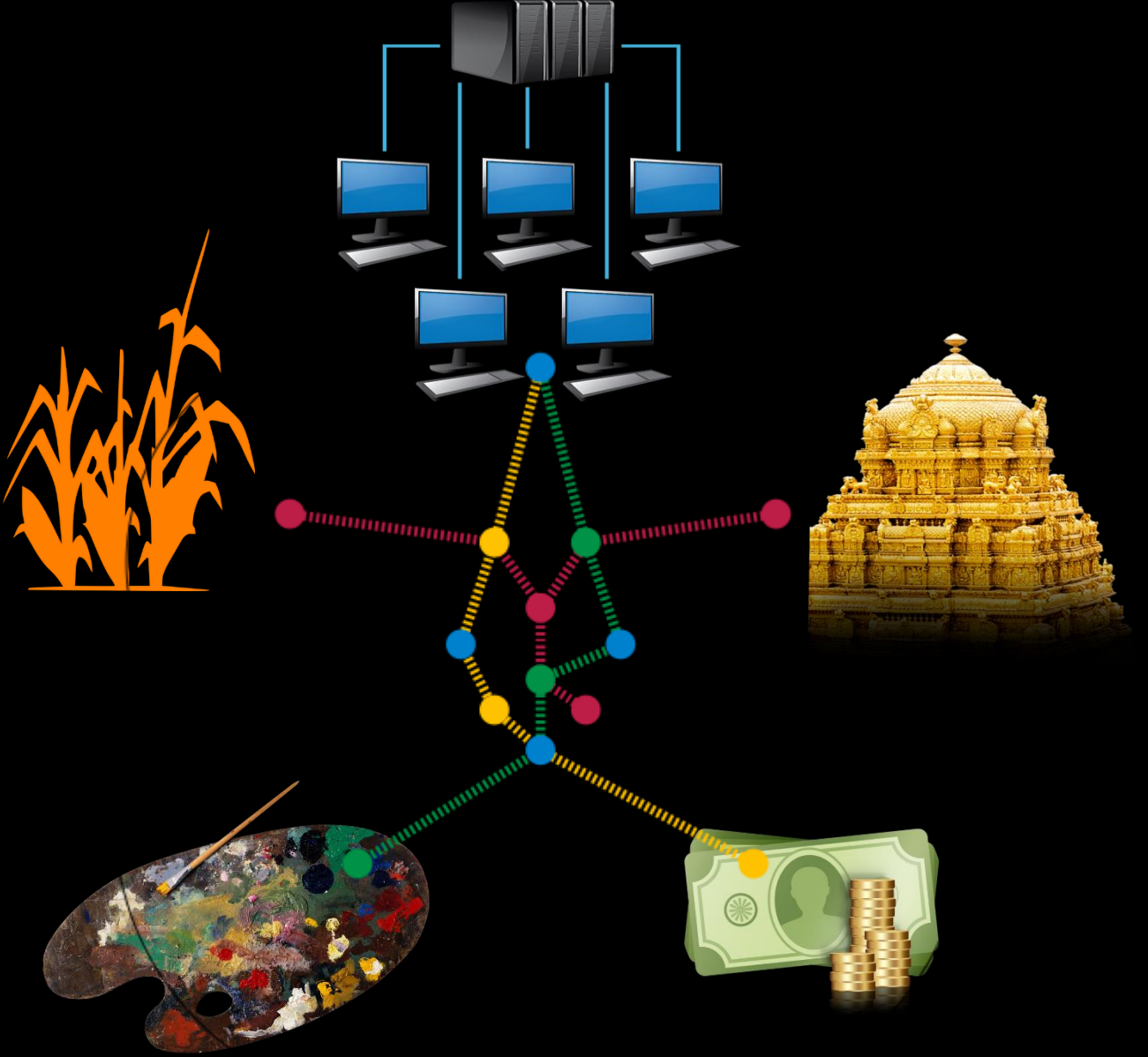


ಜ್ಞಾನ ಲೋಕ

A Multi-Faceted, Multi-Language Monthly Magazine

April 2019



Compiled, edited and published by
Venkateshprasanna HM & Shivaprasad K

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ಜ್ಞಾನ ಲೋಕ

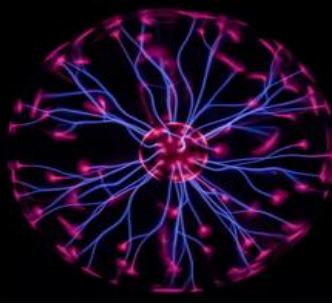
ಸಂಪಾದಕೀಯ

ಇದೇ ವಿಶ್ವಲ್ಪ ತಿಂಗಳು - 20 ವರ್ಷಗಳ ಇಂದೆ ಜ್ಯೋತ್ಸುಲನಲ್ಲಿದ್ದಾಗ ನಿಂತು ಹೋದ ಖಯಾಲಿಯೊಂದನ್ನು ಮತ್ತೆ ಜೊಂಭಿಸಬಾರದೆಂಬ ಮನಸ್ಸು ನನಗೂ ನನ್ನ ಸ್ನೇಹಿತ ಶಿವಪ್ರಸಾದನಿಗೂ ಇದೇ ಕುಡಿನಾಲ್ತರ ಬೆಳಗಿನ ಜಾವನ ನಡಿಗೆಯ ಸಮಯ. -ದಲ್ಲ ಬಬ್ಬನೇ ಬಂದದ್ದು ಇತ್ತೀಚೆಯೇ. 14 ವಿಶ್ವಲ್ 1999ರ ದಿನ ನಾವಿಬ್ಬರೂ ರೈ ಬೋಡಿಸಿ ಭರಂಭಿಸಿದ್ದ ರೈಬರಹ ದಿನಪತ್ರಿಕೆ "ಜೊ ನಲೊಣ"ದ ಕೊನೆಯ ಪುಟ ಪ್ರಕಟವಾಯಿತು. ಅಂದು ಅಂಬೇಡ್ಕರ್ ಜಯಂತಿಯಂದು ಶಿವಪ್ರಸಾದನು ಅಂಬೇಡ್ಕರ್ನ ಚಿತ್ರವೊಂದನ್ನೂ ಬಿಡಿಸಿ ಒಂಕೇ ಕಾಣೆಯ ಪತ್ರಿಕೆಯನ್ನು ಜೆನ್ನಾಗಿಯೂ ತುಂಬಿಸಿದ್ದ. ದಿನಕ್ಕೊಂದು ಪತ್ರಿಕೆಗಳನ್ನು ಕೊಂಡುಕೊಳ್ಳುತ್ತಿದ್ದೆವು. ಒಂದು ದಿನ ನಾನು ಪತ್ರಿಕೆ ಬರೆದರೆ ಮರುದಿನ ಅವನು. ಅದರ ನಂತರ ಮತ್ತೆ ನಾನು. ಡಾನ್ ಸರತಿಯ ಮೇಲೆ ನಮ್ಮ ಕೆಲಸ. ಯಾರು ಬರೆದರೂ ಕೆಳಗೊಂದು ಕರಾರ್ಥದ ಕೆಲಸ ಇಟ್ಟು. -ಕೊಂಡು ಬರೆಯುವರು. ಅದೇ ವಿರಹವೇ ಪ್ರತಿ. ನಾನು ಬರೆದ ದಿನ ಲಿ ಕರಾರ್ಥದ ಪುಟವನ್ನು ಶಿವಪ್ರಸಾದನಿಗೆ ಕೊಡುವುದು; ಅವನು ಬರೆದ ದಿನ ಅವನು ನನಗೆ ಕೊಡುತ್ತಿದ್ದ. ಅಷ್ಟೇ. ಅದರಲ್ಲೂ ಒಂದು ಸಂಕಲ್ಪ.

ಇಷ್ಟಲ್ಲಾ ಪ್ರಚಾರ ಕೊಡುವುದು ನೋಡಿದರೆ ಓದುಗರು ನಾವೇನೋ ಲಿ ಪತ್ರಿಕೆಯನ್ನು ಕೂಲಿವು ವರ್ಷಗಳ ಕಾಲ ನಡೆಸಿದೆಯೆಂದು ಕೊಳ್ಳಬಹುದು. ಲಿವರೆ ನಾವು ಕೊಂಡುಕೊಂಡಿದ್ದು ಕೇವಲ ಏಕೆಂದರೆ ಲಿವರೇ ಸಂಚಿಕೆಗಳನ್ನು! ನಮ್ಮಿಬ್ಬರಿಗೂ ಲಿವರೇ ಪ್ರಚಾರ ವಿದ್ಯಮಾನಗಳು ಮತ್ತೆವುಗಳ ಬಗೆಗೆ ತಿಳಿದುಕೊಳ್ಳುವ ಲಿವರೇ ಬಹಳ. ನನಗಂತೂ ರಸಪ್ರಶ್ನೆ, ಕಾಮಾನ್ಯ ಜ್ಞಾನಗಳಲ್ಲಿದ್ದ ಲಿವರೇಯಿಂದ ಲಿವರೇ ಪುಟಪುಟಗಳನ್ನೊಡ್ಡುವ ಗೆಲ್ಲು ಬಹಳ. ಅದು ನನ್ನ ಭಾಷೆಯ ಬೆಳವಣಿಗೆಗೂ ಸಹಾಯವಾಯಿತೆನ್ನೋಣ. ಅಷ್ಟೇ ಅಲ್ಲದೆ ನಮ್ಮ ಕುಟುಂಬದ ಅತ್ಯಂತ ಲಿವರೇಯ ಸ್ನೇಹಿತರೊಬ್ಬರು ಪತ್ರಿಕೆಯ -ರಾಣಿ ಕೆಲಸ ಮಾಡುತ್ತಿದ್ದರು ನನಗೆ ಇನ್ನೊಂದು ರೀತಿಯ ಕುಮ್ಮಕ್ಕು ಕೊಟ್ಟರು. ನನಗೆ ಲಿವರೇ ಅವಕಾಶವೇ ಪತ್ರಿಕೆಯೊಂದು ನೆರವುಸೇರಿದ್ದದ್ದು ಸಹಜ.

ಲಿ ಜೊ ನಲೊಣ ಪತ್ರಿಕೆಯ ವಿಚಾರಕ್ಕೆ ಮತ್ತೆ ಬರೋಣ. 14 ವಿಶ್ವಲ್ 1999ರ ನಂತರದ ದಿನ ಕರಾರ್ಥದಂತೆಗಳಿಂದ ನಾನು ನನ್ನ ಜವಾಬ್ದಾರಿ ನಿರ್ವಹಿಸಲಾಗಲಿಲ್ಲ.

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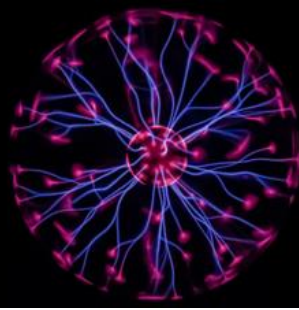


నంతరం దిన శివప్రసాదనా సుఖ. పరిశీలించును మనగండు నావు
నమ్మ పుట్టియున్న ఏకావశి సంతాపించునాని మామూడినదేవు! హిందు
సంఘం శ్రీరంగం. నంతర "జ్ఞానలాలిత" మానిరవాయితు, కృష్ణమానిర-
-వాయితు, అధ్యపాదక, వాఙ్మయగ్రామ శ్రీని పరిపాకవాయితు. యావచ్చు
బట్టకు రక్షణలల్ల. శివమేలే నమ్మ నమ్మ మీదు ముఖ్యవానిబట్టు పుత్రిక
నేమిదన్నో సరియి. 2012లో మక్తే శివప్రసాదనాను భేదించునాని శ్రీరంగ-
-సిని మేలే చలవు బారి ఈ విషయ నేనబిసికొందు నమన నావే దాశ్వు
మాదికొందు నేనీది.

అదే ఈ కింగ్ ముకుతే మక్తే స్వల్ప ముందువంది "మక్తే ఈ
ప్రయత్న మాదికొందు?" ఎనిసి. యావ విషయగ్రామ బగ్గి బరియువురు
ఎంబురు బగ్గి బరియువురు. చంద- శ్రీరంగం విరచించు లోమనగ్రామ
నేరినువునర బగ్గి నిధానవాయితు. మానిరవాని ప్రయత్నలు కిమూని-
-సరియి. ఎల్లెల్ల సాధ్యమే అల్లె "కృష్ణ బరిక పుత్రిక" యానియే
బరిసికొచ్చు ప్రయత్న మాదికొందుకొందేవు. అది పరిమే ఈ కృష్ణ బరిక
సంపాదకయ. ఈ బరియా ఇది ఎప్పు యి నడియుత్తరం గూర్చి
అదే అదే బరియ సడనర ఈ విషయం నమ్మించులల్ల దగ్గర అదే.
కేలవచ్చు విషయగ్రామ బగ్గియదరూ స్వల్ప శ్రీరంగం కిమూని బరిసికొంది
-దేవం అనిసికొందుకొందే. అవునగ్ర బగ్గియే బరియోనివాగలంబ
శ్రీరంగంకొని, ముందిన సంఘంగ్రామ నావే ఎదురు నాడుక్తిదేవు.
నాడుకొని, అదే ముందువరియుక్తిదేవు...

- వరికేతప్రసన్న.

ಜ್ಞಾನ ಲೋಕ



ಜ್ಞಾನಲೋಕವೆಂದೂ ಹೆಸರು.

‘ಪುತ್ರರೆಗಳ’ ಎನ್ನುವುದು ಜ್ಞಾನಾರ್ಜನೆಯ ಸಂಕೇತವಾದ ಕಾಲದಲ್ಲು
ಇವತ್ತುಕಾದ ಈ ನಾನು ಹುಟ್ಟಿ ಬೆಳೆದದ್ದು ದಾಸನ ಜೀವನ, ಚಿನ್ನರಾಯಪಟ್ಟಣದ
ಗೌಡೇಗರೆ ಎಂಬ ಹುಟ್ಟು ಗ್ರಾಮ. 5 ನೇ ತರಗತಿಯವರೆಗೂ ಹುಟ್ಟಿದ ಉರಿಸ್ಸೆಯೇ
ಇಷ್ಟೇನಿರುವುದು ಮನಗಾ ನಂತರ ಮುಂದಿನ ಇಷ್ಟೇನಾದ ಸುಲಾಹನ ಸೇರಿದ್ದು ಚಿನ್ನರಾಯಪಟ್ಟ
ಣದ ನಮೋದಯ ಇಷ್ಟೇನು ಸಂಸ್ಥೆಗೆ.

ದೂರದೊಡನೆ, ಗಣಕಯಂತ್ರ ಬೆಳೆದಿದ್ದರೂ ಕೂಡ ಅಧ್ಯಯನ ಹಿಂಬಲನೆ
ಕಷ್ಟವಾಗಿದ್ದು ದಿನಗಳಲ್ಲಿ ನಾನು ಜ್ಞಾನಾರ್ಜನೆಗೆ ಹಿಂಬಲನಾದ ಏಕಮಾತ್ರ
ಸಾಧನವೆಂದರೆ ಪುತ್ರರೆಗಳು. ಈ ದಿನಗಳಲ್ಲಿ ಪುತ್ರರೆಗಳನ್ನು ಮನೆ ಹೊರಗೆಗಳನ್ನು ನೋಡುವುದು
ಅಪರೂಪವಾದ ಕಾರಣ ನಾನು ಹಿಂಬಲನಾದ ಗ್ರಂಥಾಲಯಗಳನ್ನು.

ನಮ್ಮ ಗ್ರಾಮದಿಂದ ಕಾಲೇಜು ಹೋಗಿ ಬರುವುದೇ ಸವಾಲು. ಕಾರಣ
ಸಾರಿಗೆಯ ಅರಣ್ಯ ಸಂಪರ್ಕಗಳು. ಆದರೆ ಸಾಯಾಸ್ತು ಜ್ಞಾನ, ಲೇಖನದ ಹಿತವಾಗಿದ್ದು
ಜ್ಞಾನಾರ್ಜನೆಗೆ ಮನಸ್ಸಿನ ಹಂಬಲ ಹಿಂಬಲನಾದುದರಿಂದ ಬೆಳಗ್ಗೆ 6 ಗಂಟೆಗೆ ಇರುವ
ಬಸ್ಸನ್ನು ಹತ್ತಿ ಚಿನ್ನರಾಯಪಟ್ಟಣದ ಗ್ರಂಥಾಲಯವನ್ನು ಹಿರಿಸಿ ಹೊರಡುತ್ತಿದ್ದೆ.
ಗ್ರಂಥಾಲಯ ತೆರೆಯುತ್ತಿದ್ದು 8 ಗಂಟೆಗೆ ಲಿಬ್ರರಿಯರ್‌ಗೆ ಗ್ರಂಥಾಲಯದ ಮುಖಾಂತರ
ರಾಯ್ಡು ಹುಟ್ಟು ತೆರೆಯುತ್ತಿದ್ದಂತೆ ಪುತ್ರರೆಗಳನ್ನು ಬಿಡಿ ಕಾಲೇಜು 9.30 ಕ್ಕೆ ತೆರೆಯುತ್ತಿದ್ದು.
ಒಣ ಸಾಗುತ್ತಿದ್ದ ಸಮಯದಲ್ಲಿ ಸುಹಾರ್ವರಾಯ ಪ್ರಸನ್ನ ಸ್ವೇಚ್ಛೆಯಾದ ಹೊರ
ನಮ್ಮ ತಲೆಯಲ್ಲಿ ಬಂದದ್ದು ಸ್ವಂತ ಪುತ್ರಿಯನ್ನು ಕೂಡ ಮಗುವು ಹೋದನು.

ನಮ್ಮ ಮನೆಯಲ್ಲಿದ್ದ ರೇಡಿಯೋ, ಹಿವೆನ ಮನೆಯಲ್ಲಿದ್ದ ಹಾರಿಡೋನಗಳ ಸಹಾಯದಿಂದ
ಕೇಳಿದ, ನೋಡಿದ ವಿಷಯಗಳನ್ನೆಲ್ಲ ನಾನು ಹತ್ತಿ ಮನಸ್ಸು ಕೂಡದ ಮೇಲೆ ಬರೆದು
‘ನಮ್ಮ ಪುತ್ರರೆ’ ಎಂದು ಬಣ್ಣಿಸಿದೆ. ಒಣ ಉದಯವಾದದ್ದೇ ‘ಜ್ಞಾನಲೋಕ’

ಹತ್ತೊಂಬತ್ತು ವರುಷಗಳ ಬಳಿಕದ ನನ್ನ ಹತ್ತು ಪ್ರಸನ್ನನ ಮರಾಠೀ
ಜ್ಞಾನಲೋಕಕ್ಕೆ ಮರಾಠೀಯ ಕೂಡಬೇಡವೆಂದಿರಿಸಿ ಹತ್ತಿ ಮಗುವು ಪುತ್ರರೆಗಳನ್ನು

ಹೊರತರಬೇಕೆಂಬ ಹಂಬಲದಿಂದ ಬಿಡುಗಡೆಯಾದ ಸುಖ ಪ್ರಯತ್ನ.

ಈ ಪುತ್ರರೆ ಮುಂದಿನ ಸಂಚರಣೆಗಳನ್ನು ನನ್ನ ಹತ್ತಿ, ಅಭಿರಾಮ, ಹತ್ತು
ಅನುಭವಗಳನ್ನು ಬಳಸಿ ನಮ್ಮ ಮುಂದೆ ಹಂಬಲಗಳನ್ನು ಬಯಸುವ ವಿಷಯಗಳು
ಶ್ರೀ, ಪರಿಸರ ಜ್ಞಾನ, ಭಾಗ್ಯಾಳ, ಬ್ಯಾಂಕ್ ಹತ್ತು ಉದಾಹರಣೆ ಮುಂತಾದವು.

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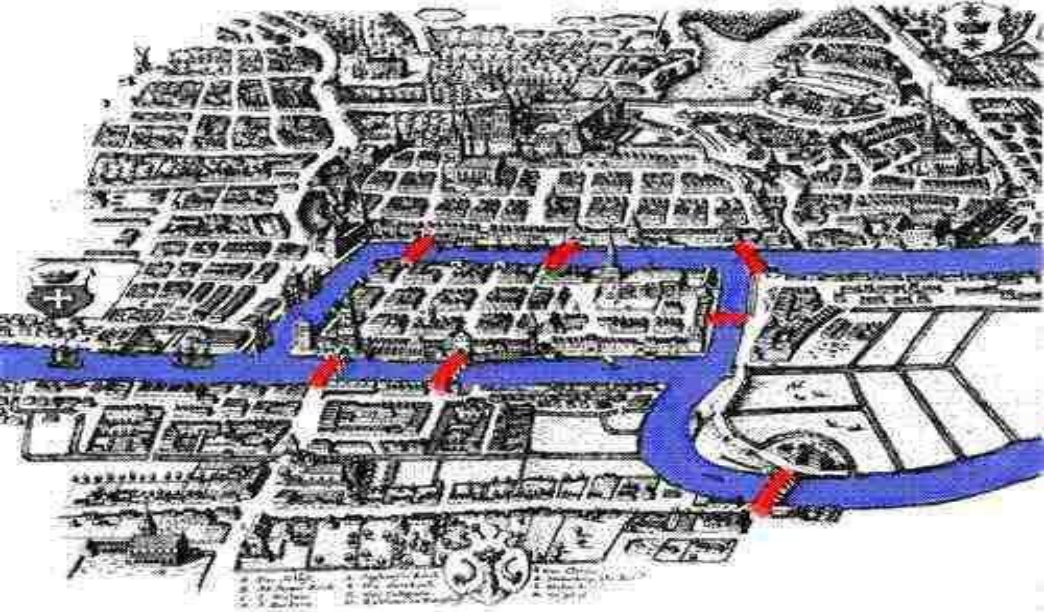
ಇವತ್ತುಕಾದ. ಕೆ.

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ಕೋನಿಗ್ಸ್‌ಬರ್ಗ್‌ನ ಏಳು ಸೇತುವೆಗಳು ಮತ್ತು ಗಣಿತದ ಒಗಟು

ವೆಂಕಟೇಶಪ್ರಸನ್ನ ಎಚ್. ಎಂ.

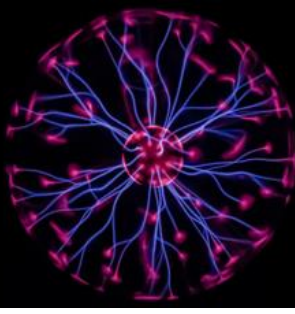
ಕೋನಿಗ್ಸ್‌ಬರ್ಗ್" (Königsberg) ಎಂಬುದು ಒಂದು ಕಾಲದಲ್ಲಿ ಜರ್ಮನಿಯ ಪ್ರಾಂತ್ಯವಾದ ಪ್ರಷ್ಯಾದಲ್ಲಿದ್ದ ಸುಂದರ ಪಟ್ಟಣಗಳಲ್ಲೊಂದು. ಹೊರಗಿನವರಾರಿಗೂ ಹೆಚ್ಚು ಪರಿಚಿತವಿರದಿದ್ದ ಈ ಪಟ್ಟಣ ಹದಿನೆಂಟನೇ ಶತಮಾನದಲ್ಲಿ ಇದ್ದಕ್ಕಿದ್ದಂತೆ ಖ್ಯಾತಿಗೆ ಬರಲು ಕಾರಣ ಗಣಿತಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ಒಂದು ಒಗಟು ಮತ್ತದರ ಪರಿಹಾರ ಎಂದರೆ ನಂಬಲಸಾಧ್ಯವಾದರೂ ಅದು ಸತ್ಯವೇ. ಆ ಒಗಟಿನ ಪರಿಹಾರದಿಂದ ಗಣಿತದಲ್ಲಿ ಒಂದು ಹೊಸ ಶಾಖೆಯೇ ಉಗಮವಾದದ್ದೂ, ಇಂದಿನ ಗಣಕಶಾಸ್ತ್ರದಲ್ಲಿ ಪ್ರಮುಖ ಪಾತ್ರ ವಹಿಸುತ್ತಿರುವ ಸಿದ್ಧಾಂತಗಳ ಮಂಡನೆಯಾದದ್ದೂ ಆ ಹಿನ್ನೆಲೆಯಲ್ಲೇ ಎಂಬುದೂ ಅಷ್ಟೇ ಸತ್ಯ.



ಕೋನಿಗ್ಸ್‌ಬರ್ಗ್ ಪಟ್ಟಣದ ಮೂಲಕ **ಪ್ರೇಗಲ್ (Pregel)** ಎಂಬ ನದಿಯೊಂದು ಹರಿಯುತ್ತಿತ್ತು. ಆ ನದಿಯ ಹರಿವಿನಿಂದಾಗಿ ಪಟ್ಟಣದೊಳಗೇ **ನೀಫಾಫ್ (Kneiphof)** ಮತ್ತು **ಲೋಮ್ಸ್ (Lomse)** ಎಂಬೆರಡು ದ್ವೀಪಗಳೂ ಸೃಷ್ಟಿಯಾಗಿದ್ದವು. ಆ ದ್ವೀಪಗಳಿಂದ ಕೋನಿಗ್ಸ್‌ಬರ್ಗ್ ಪಟ್ಟಣದ ಇತರ ಭಾಗಗಳಿಗೆ ಸಂಪರ್ಕ ಕಲ್ಪಿಸಲು ಬಹಳ ಹಿಂದಿನಿಂದಲೇ ಅಲ್ಲಿನ ವಾಸಿಗಳು **ಏಳು ಸೇತುವೆಗಳನ್ನು** ಕಟ್ಟಿಕೊಂಡಿದ್ದರು. ಅವುಗಳನ್ನು ಗುರುತಿಸುವ ಸಲುವಾಗಿ ಬೇರೆ ಬೇರೆ ಹೆಸರುಗಳನ್ನೂ ಕೊಟ್ಟುಕೊಂಡಿದ್ದರು. ಕಮ್ಮಾರರ ಸೇತುವೆ (Blacksmith's bridge), ಕೂಡಿಸುವ ಸೇತುವೆ (Connecting Bridge), ಹಸಿರು ಸೇತುವೆ (Green Bridge), ವರ್ತಕರ ಸೇತುವೆ (Merchant's Bridge) ಮರದ ಸೇತುವೆ (Wooden Bridge), ಎತ್ತರದ ಸೇತುವೆ (High Bridge) ಮತ್ತು ಜೇನು ಸೇತುವೆ (Honey Bridge) ಎಂಬುವು ಅವುಗಳಿಗಿಟ್ಟ ಹೆಸರು. ಮೇಲಿನ ಚಿತ್ರ ಕೋನಿಗ್ಸ್‌ಬರ್ಗ್ ಪಟ್ಟಣ, ಪ್ರೇಗಲ್ ನದಿ ಮತ್ತು ಏಳು ಸೇತುವೆಗಳನ್ನು ತೋರಿಸುತ್ತದೆ.

A Multi-Faceted, Multi-Language Monthly Magazine

ಜ್ಞಾನ ಲೋಕ



ಕೋನಿಗ್ಸ್‌ಬರ್ಗ್ ಪಟ್ಟಣಿಗರಿಗೆ ಪ್ರತಿ ಭಾನುವಾರ ತಮ್ಮ ಊರಿನಾದ್ಯಂತ ವಿಹರಿಸುವುದು ರೂಢಿಯಾಗಿತ್ತು. ಹಾಗೆ ನಡೆದಾಡುತ್ತಲೇ ಅವರು ತಮ್ಮ ಊರಿನ ವಿನ್ಯಾಸಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ಒಗಟೊಂದನ್ನು ಬಿಡಿಸುವತ್ತಲೂ ಗಮನ ಹರಿಸುತ್ತಿದ್ದರು. ಅವರಿದ್ದ ಪ್ರಶ್ನೆಯೆಂದರೆ ತಮ್ಮ ಊರಿನಲ್ಲಿದ್ದ ಏಳೂ ಸೇತುವೆಗಳನ್ನು ಒಮ್ಮೆ ಮಾತ್ರ ದಾಟುತ್ತಾ ತಮ್ಮ ಊರಿನ ಭಾಗಗಳನ್ನೆಲ್ಲಾ ಕ್ರಮಿಸುವುದು. ಆದರೆ ಹಲವಾರು ವರ್ಷಗಳ ಪ್ರಯತ್ನದ ನಂತರವೂ ಯಾರಿಗೂ ಅಂತಹದೊಂದು ಪಥವನ್ನು ಕಂಡುಹಿಡಿಯಲಾಗಿರಲಿಲ್ಲ. ಎಲ್ಲ ಪ್ರಯತ್ನಗಳಲ್ಲೂ ಯಾವುದಾದರೊಂದು ಸೇತುವೆಯನ್ನು ಎರಡು ಬಾರಿ ದಾಟಬೇಕಾಗಿ ಬರುತ್ತಿತ್ತು. ಎಲ್ಲ ಸೇತುವೆಗಳನ್ನೂ ಒಂದೇ ಸಾರಿ ದಾಟುವ ದಾರಿಯೊಂದನ್ನು ತೋರಿಸಿಕೊಡುವುದಕ್ಕಾಗಲೇ ಅಥವಾ ಅಂತಹದೊಂದು ದಾರಿ ಇರಲು ಸಾಧ್ಯವೇ ಇಲ್ಲವೆಂದು ಖಡಾಖಂಡಿತವಾಗಿ ಸಾಬೀತು ಮಾಡುವುದಕ್ಕಾಗಲೇ ಯಾರಿಗೂ ಸಾಧ್ಯವಾಗಿರಲಿಲ್ಲ. ಅಲ್ಲಿನ ಮೇಯರ್ ಆಗಿದ್ದ ಗಣಿತಜ್ಞನೂ ಖಗೋಳಶಾಸ್ತ್ರಜ್ಞನೂ ಆದ **ಕಾರ್ಲ್ ಗಾಟ್ಲಿಬ್ ಈಲರ್ (Carl Gottlieb Ehler)** ಸಹ ಹಲವು ಬಾರಿ ಈ ಪ್ರಯತ್ನ ಮಾಡಿ ಸೋತಿದ್ದ. ಅದರ ಪರಿಹಾರಕ್ಕಾಗಿ ಮತ್ತೊಬ್ಬ ಮಹಾನ್ ಗಣಿತಜ್ಞ **ಲಿಯೊನಾರ್ಡ್ ಆಯ್ಲರ್‌ನನ್ನೂ (Leonhard Euler)** ಸಂಪರ್ಕಿಸಿದ್ದ. ಆಯ್ಲರ್‌ನ ಪರಿಹಾರ ಕೋನಿಗ್ಸ್‌ಬರ್ಗ್ ಪಟ್ಟಣಕ್ಕೆ ವರದಾನವಾಯಿತು.

ಎರಡನೇ ವಿಶ್ವ ಮಹಾಯುದ್ಧದ ನಂತರ ಬಹಳಷ್ಟು ಹಾನಿಗೊಳಗಾದ ಕೋನಿಗ್ಸ್‌ಬರ್ಗ್ ಪಟ್ಟಣ ಈಗ ರಷ್ಯಾ ದೇಶಕ್ಕೆ ಸೇರಿದ್ದು **ಕಲಿನಿಂಗ್ರಾಡ್** ಎಂಬ ಹೆಸರಿನಿಂದ ಕರೆಸಿಕೊಳ್ಳುತ್ತದೆ. ಪ್ರೇಗಲ್ ನದಿಗೆ ಇಂದು **ಪ್ರೆಗೋಲ್ಯಾ** ಎಂದು ಹೆಸರು. ಆಗಿನ ಏಳು ಸೇತುವೆಗಳು ಈಗಿನ ಕಲಿನಿಂಗ್ರಾಡ್‌ನಲ್ಲಿ ಇಲ್ಲ. ಆದರೆ ಆ ಪಟ್ಟಣ ಮತ್ತು ಅದರ ಏಳು ಸೇತುವೆಗಳು ಮಾತ್ರ ಇಂದಿಗೂ ಗಣಿತ ಕ್ಷೇತ್ರದಲ್ಲಿ ಅಜರಾಮರವಾಗಿ ಉಳಿದಿವೆ.

ಇರಲಿ, ಈ ಕೋನಿಗ್ಸ್‌ಬರ್ಗ್‌ನ ಏಳು ಸೇತುವೆಗಳ ಸಮಸ್ಯೆಗೆ ಪರಿಹಾರವೇನು? ಅದನ್ನು ಕಂಡುಹಿಡಿಯುವ ಬಗೆ ಹೇಗೆ? ಈ ಪ್ರಶ್ನೆಗಳು ನಿಮ್ಮನ್ನು ಕಾಡುತ್ತಿದ್ದರೆ ಮುಂದಿನ ಸಂಚಿಕೆಗಾಗಿ ಕಾಯಿರಿ. ಅಲ್ಲಿಯವರೆಗೆ, ಸಾಧ್ಯವಾದರೆ ಅಂತರ್ಜಾಲದ ಸಹಾಯವನ್ನು ಪಡೆಯದೇ ಈ ಸಮಸ್ಯೆಯನ್ನು ಬಿಡಿಸುವ ಪ್ರಯತ್ನ ಮಾಡಿ. ನೀವು ಈಗಾಗಲೇ ಗಣಕಶಾಸ್ತ್ರದ ವಿದ್ಯಾರ್ಥಿಯಾಗಿದ್ದವರಾದರೆ ಈ ಸಮಸ್ಯೆಯನ್ನೂ, ಅದರ ಪರಿಹಾರವನ್ನೂ, ಆ ಪರಿಹಾರವನ್ನು ಪ್ರತಿಪಾದಿಸಿದ ಲಿಯೊನಾರ್ಡ್ ಆಯ್ಲರ್‌ನನ್ನೂ ನೆನಪಿಗೆ ತಂದುಕೊಳ್ಳಿ. ಮತ್ತೆ ಮುಂದುವರಿಸೋಣ...

Image Credits: MacTutor History of Mathematics Archive (Public Domain)

<http://www-history.mcs.st-andrews.ac.uk/Extras/Konigsberg.html>

Story Of a Man-made Desert

Shivaprasad K

Agricultural crops grown in a geographical area are decided based on the availability of natural resources like soil, its fertility, water, air etc. No natural factor can be created artificially based on human requirements. The available natural resources should be judiciously used to meet the agricultural needs. Else, they get depleted and cannot be replenished or recreated. Many production industries depend on raw materials from agriculture sources and hence, generally open their factories in the vicinity of cultivation areas. If there is any mismatch in the cultivation and in the availability of raw materials, the industries close down, which creates the problem of unemployment and imbalance in the socio-economic status of the area. Here is a small true story of a place where the natural resources depleted through wrong cultivation practices and became an artificial man-made desert.

Gauribidanur, a little known Taluk in Karnataka, belongs to Chikkabalapur district. A famous historical place called “Vidurashwaththa” is also located in this Taluk, which is also known as ‘Jallianwala Bagh’ of Karnataka. The taluk has a population of around 4 lakhs and has semi-arid to arid climate. Dry and hot weather prevails during major parts of the year. The area falls under Eastern dry agro-climatic zone of Karnataka state and is permanently categorized as drought-prone.

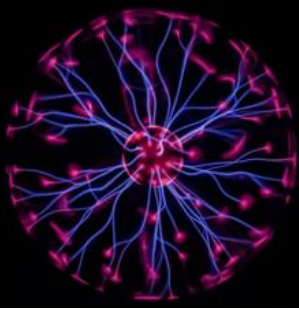


Current state of Uttara Pinakini River



Eroded Soil in few farm lands

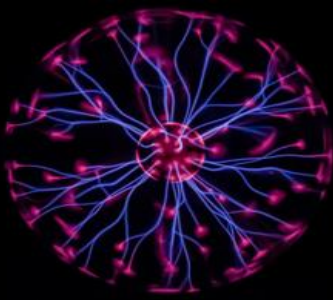
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Till 1960s, the farmers of this Taluk were growing different combination of traditional crops like Ragi, Gram, Sunflower, Sorghum, millets etc with different combinations and rotations based on the rainfall pattern in the area. Due to healthy crop rotation and optimal use of natural resources, the soil and ground water health was stable. Post 1960s, few innovative farmers migrated to cash crops and started cultivating Sugarcane in their farms using ground water extracted through borewells and open wells. Groundwater is the only source of water in the taluk as there is no inflowing river (except Uttara Pinakini, which flows only on records). Initially, sugarcane was grown in small patches by a few farmers and they utilized them for Jaggery production. The forest belt of the taluk was used as a source of fuel to boil sugarcane juice in Jaggery production. The farmers who seeded the innovative idea of sugarcane cultivation reaped huge profits from Jaggery production. These huge profits attracted many farmers and inspired them to go for sugarcane cultivation by leaving their traditional farming pattern. The migration in cropping pattern happened in such a pace that within next 5 years nearly 80% of the area was converted into sugarcane farms. Farmers dug open wells and borewells to extract ground water, which was at a healthy depth of 70 to 100 feet to cultivate sugarcane. Sugarcane is a 12 to 16 months crop and need water throughout the season. Farmers also started cutting trees on a massive basis from nearby forests to meet fuel demands. By changing the crop pattern, farmers unknowingly depleted three natural resources, i.e., ground water, soil fertility and forests.

Sugarcane grown was only used for jaggery production in the initial years till 1970s as there were no nearby sugar factories to crush it and manufacture sugar. The huge manufacture and supply of jaggery resulted in reduction in prices and sugarcane farmers started feeling the losses. Considering this, the government opened a sugar factory with a co-operative setup in 1971 at Gauribidanur. A private sector factory also came up given the potential. These factories gave more hopes to farmers to increase their income through intensive cultivation of sugarcane. In the initial years, it went well and sugarcane growers got great profits. The growth story of farmers of this taluk inspired farmers of nearby taluks like Bagepalli and even Anantapur district of Andhra Pradesh to cultivate sugarcane and supply it to these two factories. Within a short span of time, the entire area was converted into sugarcane belt.

Jñana Loka



On the other side, considering huge credit demand for crop production and irrigation facilities, most of the nationalized banks and private banks opened branches in the area and lent loans for crop production and creation of irrigation facilities in this belt.

The area witnessed severe drought conditions for 3 continuous years from 1975 to 1978 (could be attributable to the reduction of forest cover). So, there was no recharge of ground water during the drought with no rainwater available. But the sugarcane cultivation continued, using the available ground water at the same pace. The ground water source and water levels started depleting and farmers started digging upto 500-700 feet to meet the water demand. The ground water in this depth mainly contains salts of calcium, sodium, magnesium and even traces of fluorine. These salts started accumulating on top soil and soil health started deteriorating with the use of this water. Reduced water availability and decreased soil fertility made the lands unfit for sugarcane cultivation and sugar yield went down substantially within a period of 2 to 3 years.

The reduction in cane cultivation and acute shortage of cane meant that the sugar factories had to starve for raw materials and hence, stopped production. Both the factories were closed in 1982 and more than 4000 families which were directly or indirectly depending on these factories lost their source of income. Loans extended by banks to these factories and farmers became non-performing accounts and few of the banks even closed down their branches. Many farms became highly barren lands and farmers even could not go back to their old crop pattern and grow traditional crops. To earn income, many farmers planted Eucalyptus trees in their farms, which depleted ground water levels even further and the levels went down to 1200 to 1500 feet. Ground water extracted at 1200 feet had high volumes of fluorine which further deteriorated the health of the soil and made many patches of land non-cultivable.

Present situation:

The ground water levels went below 1500 feet and are highly contaminated with fluorine. Farmers are continuing to grow Eucalyptus trees on their farm lands to get income once in 3 years, by supplying to paper industries. But this is not generating adequate revenues. Many farmers started poultry units, but due to water quality, they could not sustain. As this place is in the vicinity to Bengaluru, many sold their lands to real estate developers. Many of the big landlords have already become landless laborers. Some farmers are even extracting sand from their farmlands through sedimentation process and selling it to construction sector. Most of the area has become totally 'barren'.

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High density Eucalyptus plantation



Effect on Land from Eucalyptus plantation

This is a clear example for 'Desertification'. A change in cropping pattern can create potential deserts of the future. We should follow the nature, but can't go against it. We need to learn lot from the story of this 'Man-made Desert'.

Shivaprasad K,
(Story narrated by a farmer of that area, when I was working as Agriculture officer with SBI)

"Wounded Healers"

A poem by Dr. Chandana

Wounded Healers

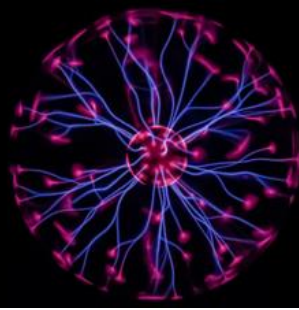
Our chosen path is hard and steep
The walk is really long
The gorge beside is dire and deep
A challenge for the strong

Put to test each passing day
Taught to toil and till
Taught to endure all the way
While we nurse the ill

Taught to live just to let live
To build the nerves of steel
Not to take, but always give
As we salve and heal

With our skill and hard-earned art
A war have we to wage
With squared chest and hardened heart
Seek the daunting gage

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Sullied by the battle's blows
Humbled by the strife
Every wounded healer knows
The other side of life

But the slightest difference made
Makes it worth the while
We deem our efforts fully paid
And wear a content smile

Dr. Chandana on Twitter: @santalum_aurum

Temple Tales: A Rendezvous of Kadambas, Chalukyas and Hoysalas

Venkateshprasanna H M

The **Kaitabheshvara Temple**, also known as the **Kotishwara Temple**, is situated in the town of **Kubatur**, near Anavatti in **Shivamogga** district of Karnataka. The temple is in fact on the outskirts of both **Kubatur** and **Kotipura**, and is only about 25 kilometers away from the historically important town of **Hanagal**.



The temple is one of the earliest constructions during the Hoysala reign, while they were still feudatories of Chalukyas of Kalyan at the time. Commissioned around **1100 CE** towards the end of Hoysala **Vinayaditya's** rule (grandfather of Vishnuvardhana), the temple is a great amalgamation of the distinct architectural styles seen among the contemporary temples constructed by Kadambas and Chalukyas, with the Hoysala specialties added a few years later. The main deity is the **Shiva Linga of Kotishwara or Kaitabheshwara**, while just outside the sanctum sanctorum, one can see a Ganesha statue as well as a Keshava statue. The large area inside the temple has 5 entrances, and is adorned with fine lathe-turned soapstone pillars.

The main inner ceiling (*Bhuvaneshwari*) is an intricately carved magnum opus, and the outer walls are devoid of any major carvings except for the *keerti mukhas*. The parapet over the eaves though, has a typical Hoysala feel, with a lot of small and detailed carvings of deities including the Asta Dikpalakas, Keshava, Shiva in his Bhairava and Nataraja forms, dancing Ganesha, Ugra Narasimha, Varaha, Mahishamardhini and more.

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The serenity in and around this temple village is also a further reason to visit this unique masterpiece.

Why Indian Public Sector Banks need Recapitalization?

Shivaprasad K



Recapitalization of public sector banks and their mergers are the primary agenda of the Government from the past 3 years. The banks which were nationalized in 1969 and 1980 are under the ownership of the Government. Currently, there is one public sector bank (SBI – earlier there were two – recently, IDBI was acquired by LIC and was reconsidered as Private Sector Bank) and 17 nationalized banks in India (earlier 19, coming down to 17 with the recent Vijaya Bank, Dena bank and Bank of Baroda merger).

Let us understand the business of banking in a simplified manner. Banking business is also similar to any other business but under the strict controlled norms of Reserve Bank of India.

Let us consider a simple example. You want to build a house. Say, the cost of building the house is Rs. 40 lakh. A bank will sanction a loan of Rs. 30 lakh (75%) and insists a margin of Rs. 10 lakh (25%). If you are not able to bring 25% of the Building cost, bank will not sanction the loan. Or even if it sanctions the loan, the amount will not get disbursed till you managed to bring the margin.

The same concept is also true for banks themselves. Main source of funds for banks is deposits placed by the public. Giving loans is the principal business activity of the bank. Banks can lend loans if it can infuse required margin from its own capital at the rate specified by Reserve Bank. The current Capital rate specified by the RBI for all commercial banks is 9%. For example, to sanction and disburse a loan of Rs. 40 lakhs, a bank has to bring certain margin from its own capital. Remaining, it can use depositors' money. Each loan sanctioned by the bank is given a risk weightage as per the risk it carries, sector to which it is lent, and credit rating of borrower, etc., which is specified by RBI as per Basel Norms.

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Say, for a good rated borrower, the risk rate is 20% and loan amount requested is Rs. 40 lakh. The Risk weight on loan in this case is Rs. 40 Lakh X 20% which works out to Rs. 8 lakh. Out of this 8 lakh, bank has to bring 9% of risk weight, i.e., Rs. 72000 from its own capital and the remaining Rs. 39,28,000 from depositor's money. The risk weight ranges from 20% to 150%. Lower the presumed risk, lower the risk weight. If this loan is not repaid by the borrower and based on duration of nonpayment and security available, banks need to put additional capital than the normal rate specified. For example, if the loan is not repaid by the borrower for 6 months, as per the norms, the bank needs to calculate 100% of risk weight. The required capital from bank's side on this loan is 40 lakhs X 100% = Rs. 40 lakhs and capital required on it is 9% of Rs. 40 lakh, which is Rs. 3,60,000/-. This exercise is called provisioning and the same is considered as an expense for bank and deducted from income. Provisioning is made on each and every loan extended by the bank. If more number of loans become bad, more the requirement of provisioning. If the bank feels the loan sanctioned is not at all recoverable, it has to put entire amount from its own capital, which is called write-off. Through this process, banks keep the depositors money risk free despite the loan lent by them with the deposit money goes bad. Depositors money are risk free only till the time sufficient capital is available with the bank.

If we understand this concept, we can assume why the current scenario in banking requires recapitalization. From the past 5 years, due to various economic factors loan accounts are turning bad. A data says, NPAs in public sector banks (PSBs) increased by about Rs 6.2 lakh crore between March 2015 and March 2018. This led to substantial provisioning of Rs 5.1 lakh crore. The total losses posted by Indian public sector banks in FY18 itself was Rs. 88000 crores. It means, so much money got eroded from their capital (own funds) and made most of the banks out of complying capital requirement norms. They have reached such a stage that, even with the availability of deposits, they are not in a position to sanction new loans. Unless there is new lending, banks cannot earn interest income, which is the primary source of income for banks. Banks can increase their capital from raising fresh capital or from internal profits. As most of the public sector banks are loss-making, they are unable to raise the capital from external investors. The increased provision expenses resulted from many big loan accounts going bad are driving the banks to book huge losses and this is eroding the existing capital base itself. This is making the public sector banks non viable for fresh lending and immediately calls for fresh capital infusion. If this decision is not taken, every public sector bank which is in loss will lose the opportunity of fresh lending and also to earn fresh income.

Jñana Loka

ಕಲೆ: ದೇವನಹಳ್ಳಿಯ ರಥೋತ್ಸವ

- ಲೋಕೇಶ್ ನರಸಿಂಹಾಚಾರ್



ದೇವನಹಳ್ಳಿ ಕೋಟೆ ಶ್ರೀ ವೇಣುಗೋಪಾಲಸ್ವಾಮಿ ಬ್ರಹ್ಮ ರಥೋತ್ಸವ ಮತ್ತು ಜಾತ್ರೆಯ ಮನೋಜ್ಞ ಚಿತ್ರಣ
ಲೋಕೇಶ್ ನರಸಿಂಹಾಚಾರ್ಯರಿಂದ

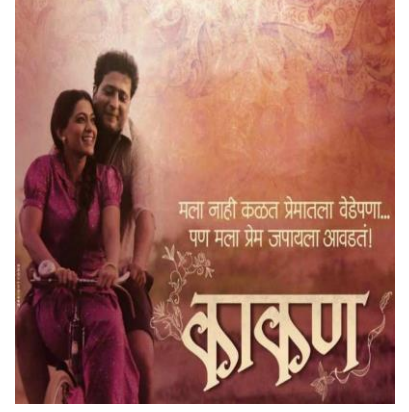
Lokesh Narasimhachar on Twitter: @acharya2

A Multi-Faceted, Multi-Language Monthly Magazine

Movie I Watched: "Kaakan"

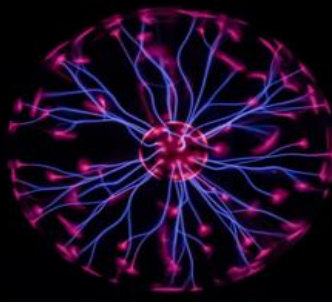
- Venkateshprasanna H M

Recently, I watched the movie "**Kaakan**", a Marathi romantic drama made in 2015. I got drawn towards the movie on Netflix pretty much unplanned to be honest, as this is not a genre I watch much. The credit must go to the music in its closing credits - an enchanting aalaap in Raga Charukeshi by **Hamsika Iyer**. That raised my expectations and I wasn't disappointed in the end. It is a well-made movie by actress **Kranti Redkar** who turned director with this movie, and some really brilliant acting by **Urmila Kanetkar**, **Jitendra Joshi** and young **Ashutosh Gaikwad**.



"Kaakan" means bangle in Marathi, obviously deriving from the Sanskrit word "KankaNa". The track seems to be a tried and tested one - a story of love between two young souls from different social backgrounds. "**Sudhamati**", played by Urmila Kanetkar, is from a decently well off family while "**Kisu**", played by Jitendra Joshi is quite poor, and struggling to make ends meet. But the story itself is from a couple of generations ago, so life is simple and straightforward in a village setting, but their love has no acceptance in the girl's household. Sudha gets married off against her will and Kisu is left only with her memories and further struggles in life.

Many years on, Kisu is dreaded by kids in the village and is an outcast by everyone, but most don't know his sad story. A kid named "**Gopi**", played by Ashutosh Gaikwad, gets curious about Kisu and the whole story starts to unravel. Gopi grows close to Kisu due to the turn of events and can go to any extent to help him reunite with Sudhamati as he gets to know more and more about them. But there is no information about Sudha for many years after her wedding and Gopi goes on a journey of finding out more of her whereabouts. The innocence of Kisu and Sudha in their youth, and that of Gopi in his boyhood to help them with no expectation in return, come out exceptionally well in the movie. The story could be a tried and tested one, but is viewed from a uniquely different angle and it makes the movie special. Gopi's growth as a person as he takes the reunion journey is a highlight of the movie. Of course, Kaakan, the bangle, has a pivotal role to play in the turn of events, and that is fascinating. While every actor has given his or her best, Urmila Kanetkar shines and her expressive eyes lift the movie a couple of notches higher. The cinematography and the background score are the other reasons why this movie is a success. This may not be a timeless classic, but is a really well made movie with a wonderful story.



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Venkateshprasanna H M

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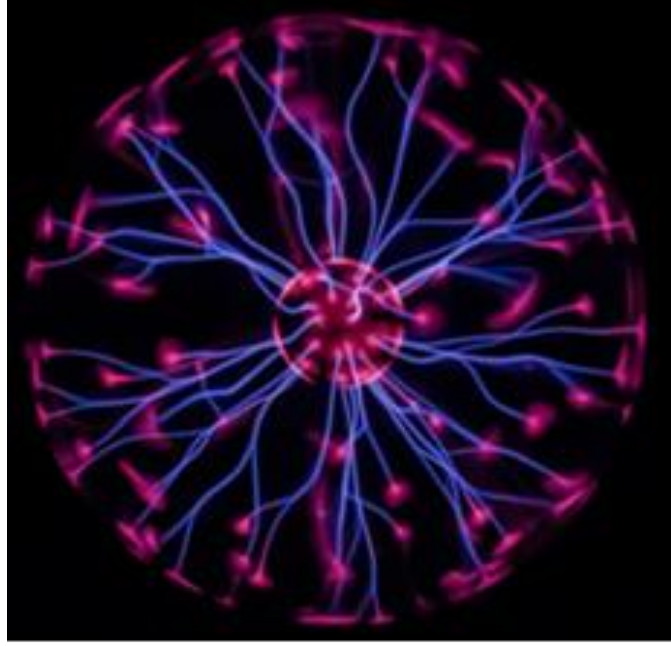
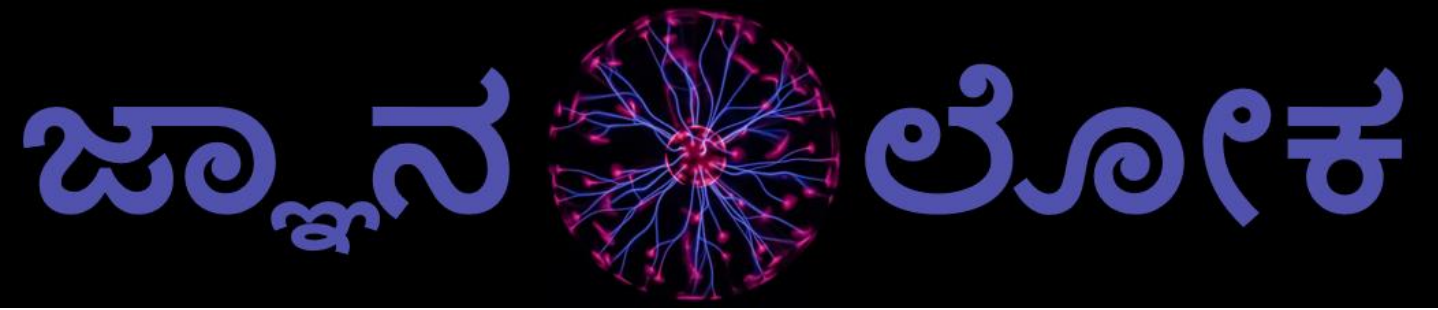
ಪಾತಿರಿಯೊಳಗೆಳ್ಳೆಯರೆ ಮೇಲ್ತರುಗುವಂಬುಚರ
ಛಾತಿಯಿಂದದಕಂಬನೆಸೆಯುವ ಸವಾಲು |

ಠೀತಿ ಚೊಮ್ಮನದಿದಾರಲು ಭೇದಿಸುವ

ಶ್ವೇತವಾಹನರೆಳ್ಳೊ? - ಅಂಕುಡೊಂಕ ||

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- ಪಾತಿಯ+ಒಳಗೆ+ಎಳ್ಳೆ+ಇರೆ = ಪಾತಿಯೊಳಗೆಳ್ಳೆಯರೆ
 - ಮೇಲ್+ ತರುಗುವ+ಅಂಬುಚರ = ಮೇಲ್ತರುಗುವಂಬುಚರ
 - ಅಂಬುಚರ = ಮೀನು
 - ಛಾತಿಯಿಂದ+ ಅದಕೆ+ಅಂಬನು+ಎಸೆಯುವ = ಛಾತಿಯಿಂದದಕಂಬನೆಸೆಯುವ
 - ಚೊಮ್ಮನದು+ಇದು+ ಭಗರಲು = ಚೊಮ್ಮನದಿದಾರಲು
 - ಚೊಮ್ಮ = ಬ್ರಹ್ಮ
 - ಶ್ವೇತವಾಹನರು+ ಎಳ್ಳೊ = ಶ್ವೇತವಾಹನರೆಳ್ಳೊ
 - ಶ್ವೇತವಾಹನ = ಅರ್ಜುನ.
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- ಕೊಯ್ತುಳ್ಳ ದೇಗುಲಗಳಲ್ಲಿ ಪ್ರತಿಬಂಭವನ್ನು ನೋಡಿಕೊಂಡು
ಮೀನಿಗೆ ಬಾಣ ಇಡುತ್ತಿರುವ ಅರ್ಜುನನ ಜೀಕೋಕಾಂತಿ
ಕಿಲ್ಲಕ್ಕೊ ಮತ್ತೂ ಮಂಕುತಿಪ್ಪನ ರಗ್ಗದಂತಹ ಮೇರುಕೃತಿಯನ್ನು
ರನ್ನಡಕ್ಕೆ ಕೊಟ್ಟ ಶ್ರೀ ಡಿ.ವಿ. ಗುಂಡಪ್ಪನವರಿಗೂ ಶ್ರೀಕೃಷ್ಣ.



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